Using a MPO Travel Demand Model to Inform and Change Zoning & Funding Decisions
Agenda

- Context and Introduction
- Nuts and Bolts of Analysis
- Project Outcomes
Setting the Stage
Introduction into Williamson County, TN
Introduction to Williamson County, TN

Williamson County surpasses the rest of the Nashville MSA with educational attainment, average earnings, population growth, and job growth.

<table>
<thead>
<tr>
<th>County</th>
<th>Educational Attainment</th>
<th>Unemployment Rate</th>
<th>Average ACT Score</th>
<th>Median Home Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Williamson</td>
<td>55%</td>
<td>3.2%</td>
<td>24.6</td>
<td>$419,000</td>
</tr>
<tr>
<td>Davidson</td>
<td>36%</td>
<td>3.1%</td>
<td>18.7</td>
<td>$248,000</td>
</tr>
<tr>
<td>Maury</td>
<td>18%</td>
<td>3.7%</td>
<td>19.6</td>
<td>$190,000</td>
</tr>
<tr>
<td>Robertson</td>
<td>16%</td>
<td>3.9%</td>
<td>19.3</td>
<td>$184,000</td>
</tr>
<tr>
<td>Rutherford</td>
<td>28%</td>
<td>3.4%</td>
<td>20.8</td>
<td>$199,000</td>
</tr>
<tr>
<td>Sumner</td>
<td>25%</td>
<td>3.4%</td>
<td>21.3</td>
<td>$232,000</td>
</tr>
<tr>
<td>Wilson</td>
<td>27%</td>
<td>3.3%</td>
<td>20.8</td>
<td>$255,000</td>
</tr>
<tr>
<td>Tennessee</td>
<td>23%</td>
<td>3.6%</td>
<td>19.9</td>
<td>$185,000</td>
</tr>
</tbody>
</table>

“Williamson County surpasses the rest of the Nashville MSA with educational attainment, average earnings, population growth, and job growth.”
Over the next 25 years, Williamson County is expected to see an additional 353,000 residents, 35% of which will come to the rural areas of the county.
From 2010-2015, Williamson County employment grew by approximately 25,000 jobs, leading the Nashville region.

Over the next 25 years, the total county employment is expected to grow by an additional 161,000 jobs.
Byproducts of Success

As attractiveness and growth continue to bring more residents and more employers, the burden falls on the infrastructure that supports them.
The Growing Traffic Problem

While all of the major corridors see high daily traffic volumes, the rural roads have also continued to see increases, specifically in the eastern portions of the county.
Recent planning efforts undertaken identify nearly $400 million in needed transportation improvements.

$736 million

$514 million Capital Improvements
- $291 million State Routes
- $223 million County Roads

$222 million Operational Improvements
- $67 million State Routes
- $155 million County Roads

$378 million for County-owned facilities alone
64% ($357 million) of the county budget goes towards the school system.

Total budget for County Highway Department is $11.5 million with $5.7 going towards highway and bridge maintenance alone.

Major funding sources include:
- Wheel Tax (34%)
- Gas and Motor Fuel Tax (30%)
- Business Tax (28%)
- Property Tax (4%)
The Nashville Area MPO maintains an activity-based model for the 7-county area, which includes Williamson County.

Travel demand within the model was first aggregated by vehicle class and then segmented for passenger vehicles based on 4 types of residential locations.
Model Analysis Results

Approximately 52% of the people traveling on the major county roads are not county residents.
Review of allowable zoning in the rural areas showed that over the next 25 years, the unincorporated portions of the county have the capacity to develop at nearly 4x the rate seen in the past.

County residents are expected to be predominant user of major county roadways by 2040 even though regional traffic continues to remain a sizable share of the overall traffic.
## Nuts and Bolts of Our Analysis – Funding Options

<table>
<thead>
<tr>
<th>Funding Options</th>
<th>Revenue Potential</th>
<th>Technical Ease</th>
<th>Proportionate to Demand</th>
<th>Legal</th>
<th>Burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Tax</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Residents</td>
</tr>
<tr>
<td>Transportation Utility - Countywide</td>
<td>Positive</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Negative</td>
<td>Residents/Non-Resident</td>
</tr>
<tr>
<td>Transportation Utility - Unincorporated</td>
<td>Positive</td>
<td>Neutral</td>
<td>Neutral</td>
<td>Negative</td>
<td>Residents/Non-Resident</td>
</tr>
<tr>
<td>Wheel Tax</td>
<td>Positive</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Residents</td>
</tr>
<tr>
<td>Gas Tax</td>
<td>Negative</td>
<td>Positive</td>
<td>Neutral</td>
<td>Positive</td>
<td>Residents/Non-Resident</td>
</tr>
<tr>
<td>Sales Tax</td>
<td>Negative</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Residents/Non-Resident</td>
</tr>
<tr>
<td>Impact Fees</td>
<td>Positive</td>
<td>Negative</td>
<td>Positive</td>
<td>Positive</td>
<td>New Residents/Non-Resident</td>
</tr>
</tbody>
</table>
Traffic Volumes and Congestion

Growth in the County

Land Use and Zoning Tools

Funding Options and Impacts
Project Outcomes
Proposed Strategies

Land Use and Regulatory Tools

- **Land Use.** Revisit land use policies through a comprehensive plan update.
- **Prioritization.** Target strategic investment priorities to support land use policies.
- **Mitigation.** Short-term and long-term traffic mitigation tools.

Transportation Implementation Strategies

- **Funding.** Pursue funding tools to achieve the strategic investment priorities.
- **Capital Improvement Plan.** Strategic investment priorities tied to CIP and budget process.

Coordination and Education Strategies

- **Cooperation.** Explore interlocal approaches and positioning for funding.
- **Lobbying and education.**
In the short-term, the County is opting to use property tax given it’s ease of implementation and relatively low tax rate.

Long-term, the County wants to pursue lobbying for legislative authority for transportation utility fees.

The County is also initiating a comprehensive look at their zoning and underlying growth policies.

The County is establishing a Capital Improvement Program, which will tie into their annual budgeting process.
Able to make unique use of the travel demand model to build a case for funding needs

Lots of engagement of steering committee, planning commission, highway commission, and public

Created buy in from stakeholders and county executives for changing the mechanisms in place and overall increasing the funding
Special Thank You

Williamson County
TN

Nashville Area Metropolitan Planning Organization

KCI Technologies
Engineers | Planners | Scientists | Construction Managers